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NOTES AND RECORDS ON
SPECIES IN THE GENERA *POLIA*
OCHSENHEIMER AND *EUXOA* HUBNER
FROM THE WESTERN UNITED STATES
(LEPIDOPTERA: NOCTUIDAE)

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THE MAJORITY OF THE SPECIES considered here represent California records, and "California" has been omitted after the county when this is the case. One species is also new to Nevada and where specimens are from another state, the state is indicated. The specimens cited in this paper are contained in the Bauer-Buckett Collection, Davis; the collection of the California Department of Agriculture, Sacramento; Entomology collection, University of California, Davis. In each species, both male and female genitalic preparations were made.

***Polia lilacina* (Harvey)**

No published records of *Polia lilacina* (Harvey) have included California. Holland (1903) reports distribution in New Mexico, and Crumb (1956) lists Maine, New Hampshire, Connecticut, New York, New Jersey, Pennsylvania, Iowa, North Dakota, Arizona, Nevada, Utah, Colorado, Oregon, Washington, Montana and all the adjacent Provinces of Canada. *P. lilacina* was originally described from Brewster, New York.

A specimen was received from Bishop, Inyo County, 3 August 1960 (R.P. Allen) and was found to be conspecific with *lilacina*. A male and a female, color form *illabefacta* (Morrison), were collected at Fort Dick, Del Norte County, 3 August and 3 September 1962 (J. W. Anderson) respectively. The maculation of this color form is less clearly defined than in *lilacina* and was, for this reason, considered a separate species for some time. The primaries in this form are suffused with lilac-brown and, thus, are somewhat obscured although maculation is more clearly defined in the male.

This well marked species might be confused with *P. liquida* Grote, or *P. meodana* (Smith), both of which possess a broader subterminal space on the primaries than does *lilacina*. Also, the subterminal line on the primaries of this species is not jagged and irregular, but smooth, lacking the outward "W" mark so prominently exhibited in *liquida* and *meodana*.

Another closely related species is *P. rugosa* (Morrison), which possesses an ash-grey pubescence covering the head, thorax, and abdomen. A dark brown pubescence of the same areas and more contrast in the markings readily separate *lilacina* from *rugosa*. Greatest length of forewing in the male is 15 mm; of the female, 16 mm.

***Polia liquida* (Grote)**

Polia liquida Grote occurs in the northern coast ranges of the western United States, extending northward into British Columbia and eastward into Alberta in Canada; in the United States, it extends eastward into Idaho and Montana. Hampson (1905) and Draudt (in Seitz, 1923) also list *P. liquida* in Colorado.

A male and a female were collected four miles east of Point Arena, Mendocino County, 5 July 1958 (W. R. Bauer and J. S. Buckett). Another pair of specimens was collected in the same locality on 10 April 1959, by the same collectors.

Within this group, *P. liquida* may be confused with *P. meodana* (Smith). Smith states, "The species (*meodana*) has been confused with *liquida* Grt., which is a much more contrastingly mottled form occurring in Washington . . . and as figured by Hampson, has narrower, more pointed primaries . . .". The characteristics Smith observed in his specimens remain constant in both species.

Greatest expanse of the forewing in the male is 15 mm; of the female 16-17 mm.

***Polia nevadae* (Grote)**

In the past few years, specimens of the rare *Polia nevadae* (Grote) have been collected in fair abundance. Previous to 1960, this species was little known and poorly represented, if not entirely lacking in most large collections. Forbes (1954) records the "race" *canadensis* Smith, which is a lighter more obscurely marked form of *nevadae*, from "New Brunswick to Mattagami River, Ontario, to Manitoba and Alberta, south to Maine and Franklin County, New York." I have not studied the types these names represent, but as Forbes is a lumpner by most standards, and yet considered *canadensis* to be a separate race, there is reason to question the conspecificity of the forms.

P. nevadae is a mottled brown, the basal area being orange-brown above basal dash, otherwise basal and transverse areas darker than subterminal area; a prominent cream colored "W" mark can be seen on subterminal line; secondaries fuscous. *P. nevadae* is quite a distinct species, its closest relative being *P. atlantica* (Grote). The California specimens of *nevadae* can not be too easily confused with *atlantica*, as *nevadae* is larger and darker. The Colorado specimens of *nevadae* are identical with, and conspecific with specimens taken near the type locality. Forbes (op. cit.) states of *atlantica* "a pale race in Manitoba to Utah, often mistaken for *nevadae*." Therefore, in specimens taken from the Great Plains region, there is reason for due caution in assigning a name to the collected specimens believed to be either *nevadae* or *atlantica*.

The author has examined specimens from California and Colorado, the majority being from Johnsville, Plumas County, California, collected by Mrs. Helena Pini. Greatest expanse of forewing 17-19 mm. *P. nevadae* was originally described from the Sierra Nevada, California, Henery Edwards No. 4582.

***Polia pulverulenta* (Smith)**

Until recently, *Polia pulverulenta* (Smith) has not been recorded west of the Rockies. In general, it is northeastern in distribution. Its previously known distribution was the New England States and adjacent parts of Canada, westward to Vancouver Island, British Columbia. Crumb (1965) lists Colorado and Washington also.

This species is dark ash-grey brown, perhaps its most distinguishing characteristic being a contrastingly large yellow lunule in the tornus region of the primaries. Other California species most likely to be confused with *pulverulenta* are: 1) *P. quadrata* (Smith), which is the same size or slightly larger, dark brown in color and lacking the prominent yellow lunule in the tornus region of the primaries; and 2) *P. assimilis* (Morrison), also closely related to *quadrata* but larger. Hampson (1903) synonymized *pulverulenta* under *assimilis* but work of later authors proved them to be separate species.

Four specimens of *pulverulenta* were collected at the University of California Sagehen Creek Project, four miles north of Hobart Mills, Nevada County, 21 June through 5 July 1962 by M. E. Irwin. One male is in the collection of the University of California, Davis. Greatest length of forewing in both sexes is 14 mm-16 mm.

***Polia lutra glaucopsis* Hampson**

Apparently, *Polia lutra glaucopsis* Hampson is seldom recorded from California, or from other western states. In the past year, two California collections and one Oregon collection were re-recorded. Two males were collected at Fort Dick, Del Norte County, 16 and 30 April 1963, by J. W. Anderson, and one female was collected 5 miles northwest of Corvallis, Oregon, 30 June 1962, by A. N. McFarland.

This subspecies was first discovered inhabiting Vancouver Island, British Columbia, 2 females composing the type series. *P. lutra glaucopsis* was originally described as a subspecies of *P. lubens* (Grote), but work of later authors prove *lutra* (Gueene) and *lubens* to be conspecific, *lutra* being the older of the two names.

This *Polia* is rather distinct and can be recognized by the contrastingly light brown inner marginal half of the basal area accompanied by its whitish tornus area and lilac subterminal area. The greatest expanse of the forewing varies slightly in different specimens, the male being 18 mm, the female 20 mm. The female of *lutra lutra* is slightly larger, with a forewing expanse of up to 22 mm.

Barnes and Benjamin (1927) found "... no good character to sort *glaucopsis*, which is only western *lubens*, from typical *lubens*. Western specimens are often darker in color than some eastern specimens, but the character does not hold for any series." The fact that *glaucopsis* is darker in coloration, accompanied with its more obscure markings and its smaller size, will help to superficially distinguish it from the nominate subspecies. McDunnough (1938) considers *glaucopsis* as a subspecies of *lutra*, but future work will probably prove our western subspecies to be nothing more than a slight variant.

***Euxoa extranea* (Smith)**

Heretofore, *Euxoa extranea* (Smith) has not been recorded in California. With better collecting methods and increasingly larger samples, *extranea* is now collected in large numbers, enabling better evaluation of its specific variation.

California specimens of *extranea* differ slightly from typical material in that the transverse anterior line of the primaries is inwardly shaded and both the transverse posterior line and the subterminal line are outwardly shaded with bands of cream-colored scales. These shadings give the appearance of a lighter ground color than that found in more northern material. This differentiation might be confusing if only a limited number of

specimens are available. Both sexes have dusky brown hind wings rather than "yellow fuscous", as stated in the original description. Originally, *extranea* was described from a single female collected in Montana, and perhaps with further study, the California specimens will prove to be of subspecific merit.

In specimens of both sexes of *extranea* determined by McDunnough (April, 1951, McD. No. 1144 Bauer-Buckett Collection), the ordinary crosslines of the primaries are black with no shadings of cream-colored scales. These specimens were collected at Mount Hood, Oregon, 17 August 1939, 6,000 foot elevation (E. C. Johnston). In a series of over thirty specimens from eight miles southwest of Johnsville, Plumas County, 11 August 1961 (W. R. Bauer and J. S. Buckett), the maculation of the primaries is quite consistently that of the lighter form. Another specimen proving to be conspecific with *extranea* is a female collected at Leavitt Creek, Mono County, 8,000 foot elevation, 10 August 1960 (A. S. Menke). In this specimen, the ordinary lines are as in typical *extranea*. Another specimen from Hornbrook, Siskiyou County, 6 August 1961, is also typical *extranea*.

One female is deposited in the collection of the University of California, Davis. Greatest length of forewing in both sexes is 18 mm.

Euxoa vertesta (Smith)

Euxoa vertesta (Smith), a pale luteous species, was originally described from Stockton, Utah. *E. vertesta* is on the wing in September and October over most of its range; however, specimens have been collected from California in October only. The available literature cites Utah as the only state in which this species occurs. The author has before him twenty-six specimens of both sexes from California, Nevada, and Utah. The California series consists of six males and four females from Olancho, Inyo County, 11 October 1962 (R. P. Allen). The Nevada series consists of one male and two females from Palisade, Eureka County, 4 September 1962 (T. R. Haig). The Utah series consists of two males, one from Dividend, 6-17 September by the same collector.

E. vertesta may be confused with *citricolor* (Grote); however, *vertesta* is characterized by its pale luteous coloration and weakly defined reniform on the dorsal surface of the primaries. The primaries of *citricolor* are light lemon yellow and the reniform is more strongly defined. Both species possess white secondaries and a white abdomen. Both species are found over much of

the same range . . . *vertesta* from Utah westward into California and *citricolor* from Colorado and Arizona westward into California and northward into Washington.

Greatest length of the forewing in both sexes is 15 mm. in *vertesta*.

***Euxoa edictalis* (Smith)**

Euxoa edictalis (Smith) is typically of the Rocky Mountain region in the United States, and extends westward through Canada to British Columbia (Kaslo). Apparently, this species has not been previously recorded from California, thus making this large series before me from Mono County the first published record.

E. edictalis occurs in the White Mountains, Mono County, and can be collected quite abundantly in June at higher elevations. In 1962, and again in 1963, Mr. Paul Mannis and Mr. David Mathais of the White Mountain Research Station, Mono County, (elevation 10,150 feet), have ardently collected many species of which *edictalis* was one.

Through the cooperation of Dr. David F. Hardwick, Canadian National Collection, Ottawa, the author received specimens of *edictalis* from both Colorado and from Kaslo, British Columbia. From these specimens, close examination was made as well as genitalic mounts of both sexes. This study proved the White Mountain specimens to be very close to *edictalis* but there are minor differences throughout.

E. edictalis is quite characteristic and can be confused with no described species thus far. It is characterized by its deep olive, grey-brown ground color of the primaries, the normal markings being deep brown or black; the antennae of the male are bi-pectinate; the thorax is very robust due to the great amount of vestiture.

The greatest length of the forewing in the male is 16 mm; in the female, it is 17 mm.

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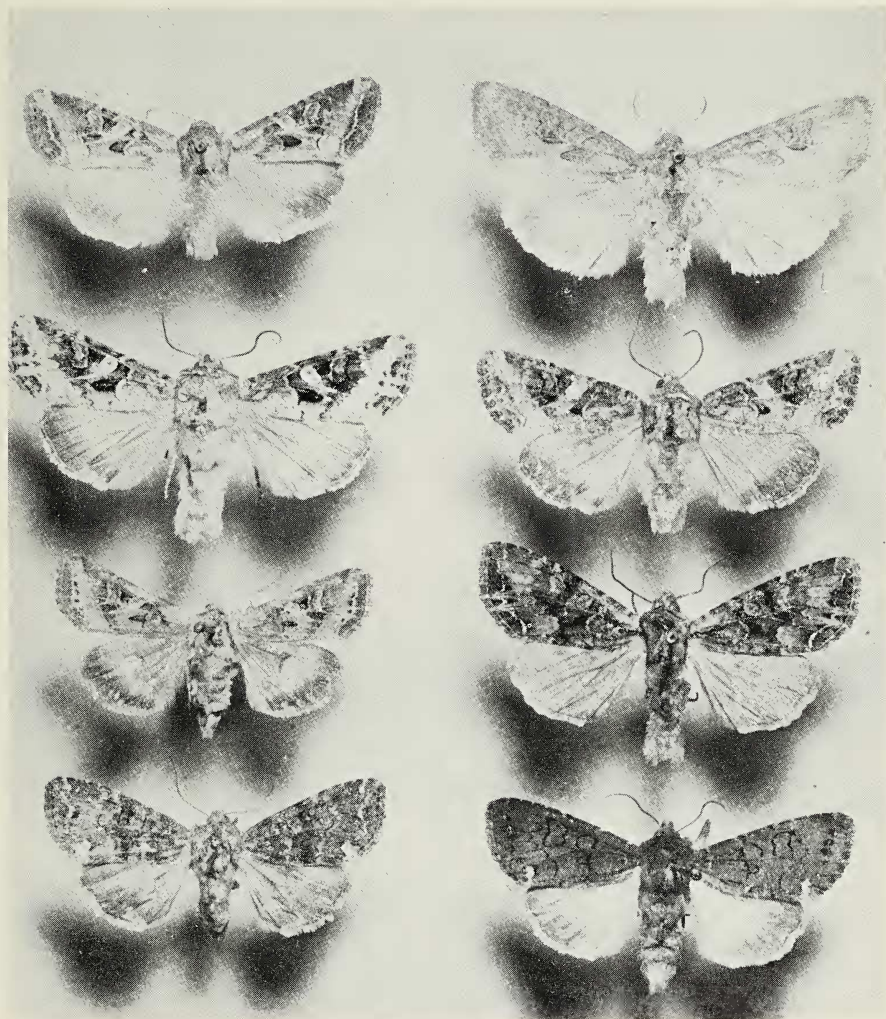


PLATE 1

Top row, left, male, *Polia lilacina* (Harvey), Bishop, Inyo County, California, 3 August 1960 (R. P. Allen); top row, right, male, *P. lilacina illabefacta* (Morrison), Fort Dick, Del Norte County, California, 25 June 1963 (J. W. Anderson); second row, left, male, *P. liquida* (Grote), Fort Dick, Del Norte County, California, 21 May 1963 (J. W. A.); second row, right, male, *P. meodana* (Smith), Convict Creek, Mono County, California, 30 June 1963 (M. G. Tunzi); third row, left, female *P. rugosa* (Morrison), Ashland, Maine, 10 July 1945; third row, right, male, *P. nevadae* (Grote), Johnsville, Plumas County, California, 7 June 1963 (H. J. Pini); bottom row, left, female, *P. pulverulenta* (Smith), Sagehen Creek, near Hobart Mills, Nevada County, California, 21 June 1962 (M. E. Irwin); bottom row, right, female, *P. assimilis* (Morrison), Lake Katherine, Oneida County, Wisconsin (H. M. Bower).

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PLATE 2

Top row, left, male, *Polia lutra glacopis* Hampson, Fort Dick, Del Norte County, California, 16 May 1963 (J. W. A.); top row, right, female, *P. quadrata* (Smith), Nelson Creek Road, 12 miles west Johnsville, Plumas County, California, 12 June 1961 (W. R. Bauer & J. S. Buckett); second row, left, female, *Euxoa extranea* (Smith), Mount Hood, Oregon, 17 August 1939, 6,000 ft. elevation (E. C. Johnston); second row, right, male, *E. extranea* (Smith)?, 8 miles southwest Johnsville, Plumas County, California, 12 August 1961 (W. R. B. & J. S. B.); third row, left, female, *E. citricolor* (Grote), 50 miles south Wells, Elko County, Nevada, 10 Sept. 1959 (T. R. Haig); third row, right, female, *E. vertesta* (Smith), Olancha, Inyo County, California, 11 October 1962 (R. P. A.); fourth row, left, male, *E. edictalis* (Smith), Crooked Creek, White Mountains, Mono County, California, 10,150 ft. elevation 26 June 1962 (J. S. B. & G. M. Trenam); fourth row, right, female, *E. edictalis* (Smith), same data as preceding.

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